

At page 5, line 27 to page 6, line 18, please delete "A tuner within...synchronized to baseband" and substitute therefor the following:

--The radio receiver embodies a basic method of controlling the operating mode of an equalizer contained within the receiver, which includes the steps of identifying a direct current (DC) component of a received signal and controlling the operating mode of the equalizer in response to the identification of the direct current (DC) component of the received signal.

In accordance with another feature of the invention, at certain times, the received signal may comprise multi-level symbols representing data and a field synchronizing signal, the symbols being characterized by being accompanied by a substantially constant direct current (DC) offset component, and at other times it may comprise multi-level symbols representing data and being characterized by not being accompanied by the substantially constant direct current (DC) offset component. Further, the step of controlling the operating mode of the equalizer in response to the identification of the direct current (DC) offset component of said received signal comprises substeps of (1) determining whether or not the received signal is currently accompanied by the substantially constant direct current (DC) offset component; (2) calculating desired spectral response for the equalizer using at least a portion of the field synchronizing signal as a training signal, in response to it being determined that the direct current (DC) level the received signal is currently accompanied by the substantially constant direct current (DC) offset component; and (3) establishing desired spectral response for said equalizer other than from calculations using at least a portion of said field synchronizing signal as a training signal, in response to it being determined that said received signal is currently unaccompanied by said substantially constant direct current (DC) offset component. The method step of establishing a desired spectral response for the equalizer other than from calculations using at least a portion of the field synchronizing signal as a training signal consists of establishing a flat amplitude-versus-frequency characteristic in response to it being determined that said received signal is currently unaccompanied by the substantially constant direct current (DC) offset component.

In accordance with another basic feature of the invention the foregoing method of controlling the operating mode of an equalizer comprises determining the variation, during an interval of time, of the direct current (DC) level of a received signal; and controlling the operating mode of the equalizer in response to the determined variation.

In accordance with yet another feature of the foregoing method, the received signal comprises multi-level symbols representing data and a field synchronizing signal, the symbols being characterized by a DC offset and wherein the determining step further comprises processing the field synchronizing signal to determine the variation of the DC offset in the received signal. In yet other features of the invention, the field synchronizing signal comprises a pseudo random number symbol sequence and the processing comprises sampling a part of the pseudo random number symbol sequence. According to the present invention, the sampled symbol sequence may be surrounded by a plurality of non-variant symbols.

The invention also is embodied in a receiver for digital television signals comprising a detector for determining the direct current (DC) level of a received digital television signal and an adaptive equalizer having different operating modes for responding to received digital television signals, the operating mode of the adaptive equalizer being selected in response to the direct current (DC) level of the received digital television signal.

In accordance with another feature of the invention, the receiver is responsive to the amplitude of a direct component of said received signal being more than a prescribed threshold value, such that the adaptive equalizer is conditioned to have its amplitude-versus-frequency characteristic determined in response to calculations using at least a portion of the field synchronizing signal as a training signal.

In accordance with yet another feature of the invention, the receiver is responsive to the amplitude of a direct component of a received signal being less than a prescribed threshold level so that a desired spectral response for the adaptive equalizer is established other than from calculations using a training signal.

In accordance with a further feature of the invention, the receiver is responsive to the amplitude of a direct component of said received signal being less than a prescribed threshold level, and the adaptive equalizer is conditioned to have a flat amplitude-versus-frequency characteristic.

The invention further is embodied in a receiver for digital television signals comprising an adaptive equalizer having different operating modes comprising a means for determining the

variation of the direct current (DC) level of a received signal during an interval of time; and a means for controlling the operating mode of said adaptive equalizer as a function of the determined DC variation. The received signal may include a field sync signal and the DC variation determining means may operate on the field sync signal. Further, the field sync signal may comprise a pseudo random number sequence of symbols, and further include a means for sampling a portion of said sequence of symbols for processing by said DC variation means.

The invention also is embodied in a receiver for digital television signals that comprise multi-level symbols representing data and a field synchronizing signal, the symbols being characterized by being accompanied by a substantially constant DC component, and for signals that comprise multi-level symbols representing data and being characterized by not being accompanied by said substantially constant DC component, the receiver comprising a detector for determining the DC component of a received signal, and an adaptive equalizer having different operating modes for responding to said multi-level symbols, the adaptive equalizer arranged to have its current operating mode selected in response to the level of the direct component of the received signal as detected by the detector.

In accordance with another feature of the invention, the receiver is responsive to the direct component of the received signal being at least a prescribed threshold level, and the adaptive equalizer is conditioned to have its amplitude-versus-frequency characteristic determined in response to calculations using at least a portion of a field synchronizing signal as a training signal.

In accordance with yet another feature of the invention, the receiver is responsive to the direct component of the received signal being below a prescribed threshold level, and desired spectral response for the adaptive equalizer is established other than from calculations using a training signal. Further, the receiver is responsive to the direct component of the received signal being below a prescribed threshold level, the adaptive equalizer being conditioned to have a flat amplitude-versus-frequency characteristic. --

Page 7, line 4, after "type," insert --and--;

line 5, delete "and an amplitude-and-group delay equalizer--; and